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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,967	03/05/2002	Huo-Lu Tsai	8688.267US01	8407

23552 7590 03/16/2004

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MINNEAPOLIS, MN 55402-0903

EXAMINER

NGUYEN, CHANH DUY

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/091,967	Applicant(s) TSAL, HUO-LU	
	Examiner Chanh Nguyen	Art Unit 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Taiwan on February 8, 2002. It is noted, however, that applicant has not filed a certified copy of the Taiwan application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merminod et al (U.S. Patent No. 6,326,949 B1) in view of Han (GB 2,389,644).

As to claim 1, Merminod discloses a mouse adapted to provide electrical signals to a computer including a housing (upper housing and lower housing 12); a wheel (36) mounted rotatably in said housing and having opposite left and right sides and a portion exposed from said housing for user operation (see Figure 2 and column 4, lines 66-67). Merminod teaches a shaft (38, 44) extending in an axial direction through a center of said wheel and secured thereto, and shaft having two opposite ends disposed at said left and right sides of said wheel, respectively (see column 3, lines 24-35). Merminod teaches the wheel (36) being operable to move together with said shaft in a radial direction relative to said shaft from an upper position to a lower position (see column 3, lines 39-42, lines 64-67 and column 4, lines 12-18). Merminod

Art Unit: 2675

teaches a detecting unit disposed in said housing and adapted to provide electrical signals to the computer upon detecting movement of the wheel (see column 3, lines 56-62 and column 4, lines 26-31).

Merminod teaches a spring unit (30 and 40) mounted in the housing and including opposing first coil part (40) and second parts (30), each of which is sleeved on a respective one of said opposite ends of the shaft (38, 44) so as to permit rotation of the wheel (36) together with the shaft relative to said first coil (40) and second parts (30) and so as to be movable together with said wheel and said shaft (38, 44) in said radial direction (see column 3, lines 7-23), and each of which has opposing first and second end sections that diverge therefrom to define an angle therebetween and that slidably abut against said housing so as to permit mounting of the wheel in said housing (i.e. end section of coil 40 formed an angle with coil 40 and end section of spring 30 formed an angle with ratchet spring 32). Merminod teaches when the wheel (36) is moved together with the shaft (38, 44) and first coil part and second parts from said upper position to the lower position by an external force (i.e. a user depresses the wheel 36) so as to provide an urging force to move said wheel together with shaft (38, 44) and the first and second parts from said lower position to said upper position when said wheel is relieved from the external force (see column 3, lines 64-67).

Merminod does not mention the angle being enlarged when the wheel is depressed or relieved. In same field of endeavor, Han teaches both end of a spring (310) seated in the spring seat grooves (116a). Thus, when the wheel (300) is pressed, the two ends coil spring (310) are elastically stretching out an angle respect to

Art Unit: 2675

the coil and elastically returned to its original position when the wheel is released (see page 13, lines 13-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a structure of spring as taught by Han to the spring of Merminod so as to reduce the abrasion of serrations formed on a wheel shaft, thus maintaining the sensitive of the mouse (see page 14, lines 18-25 of Han).

Allowable Subject Matter

4. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chung (U.S. Patent No. 6,046,729) and Chen (U.S. Patent No. 6,344,643) are cited to teach a structure of mouse including a roller wheel.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Steven Saras can be reached at 305-9720.

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks
Washington, D.C. 20231

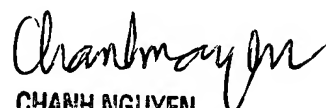
or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.


C. Nguyen
March 4, 2003


CHANH NGUYEN
PRIMARY EXAMINER